

RAD #410 (a polyester siloxane copolymer, manufactured by Tego Chemical Company), TEGO RAD #435 (a polyester siloxane copolymer, manufactured by Tego Chemical Company), and TEGO GLIDE #453 (a polyester siloxane copolymer, manufactured by Tego Chemical Company), and preferably comprises 0.1 to 5 weight% of the resin composition for manufacturing optical fiber ribbon. Particularly, Tego Glide series are effective in providing surface slipping characteristics employed in the resin along with the silicone employed oligomer.

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cmeb
Furthermore, a phenol based additive is mainly used as an antioxidant which protects the physical properties of a formed film from being deteriorated due to corrosion caused by oxidation, and it is preferably used in an amount of about 0.1 to 5 weight% of the resin composition for manufacturing optical fiber ribbon. More preferably, the antioxidant is selected from the group consisting of IRGANOX 1010 (pentaerythritol tetrakis(3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate), manufactured by CibaGeigy), IRGANOX 1035 (pentaerythritol tetrakis(3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate), manufactured by CibaGeigy), IRGANOX 1076 (octadecyl-3-(3,5-di-tert-butyl-4-hydroxyphenyl)-propionate, manufactured by CibaGeigy), and a mixture thereof.

In the claims:

Amend claims 2, 4, 6, and 10-19 as follows:

a2
2. (Amended) A resin composition for manufacturing optical fiber ribbon according to claim 1, wherein the photopolymerizable urethane acrylate oligomer containing polydimethylsiloxane is synthesized from a composition comprising i) a first polyol compound containing polydimethylsiloxane structure, ii) a second polyol compound, iii) a polyisocyanate, iv) an acrylate alcohol, v) a urethane reaction catalyst, and vi) a polymerization inhibitor.

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3. (Amended) A resin composition for manufacturing optical fiber ribbon comprising
a) a photopolymerizable urethane acrylate oligomer containing polydimethylsiloxane;
b) a monomer;
c) a photoinitiator;
d) a leveling/defoaming agent; and
e) an antioxidant;

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Q. 3
wherein the photopolymerizable urethane acrylate oligomer containing polydimethylsiloxane is synthesized from a composition comprising

i) a first polyol compound containing polydimethylsiloxane structure and selected from the group consisting of HSI 2111 (hydroxy-terminated polydimethylsiloxane), 1,3-bis(hydroxybutyl)tetramethyldisiloxane, 1,4-bis(hydroxypropyl)tetramethyldisiloxane, and a mixture thereof,

ii) a second polyol compound,

iii) a polyisocyanate,

iv) an acrylate alcohol,

v) a urethane reaction catalyst, and

vi) a polymerization inhibitor.

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Q. 4
6. (Amended) A resin composition for manufacturing optical fiber ribbon according to claim 2, wherein the second polyol compound has a molecular weight of 100 to 10,000; is selected from the group consisting of polyol including a repeat unit of $-\text{CH}_2\text{CH}_2\text{O}-$ or $-\text{CH}_2\text{CH}(\text{CH}_2\text{CH}_3)\text{O}-$, polyester polyol, polyether polyol, polycarbonate polyol, polycaprolactone polyol, tetrahydrofuran propyleneoxide ring opening copolymer, ethylene glycol, propylene glycol, 1,4-butanediol, 1,5-pentanediol, 1,6-hexanediol, neopentyl glycol, 1,4-cyclohexane dimethanol, bisphenol A, bisphenol F type diol, and a mixture thereof; and comprises 5 to 30 weight% of the photopolymerizable urethane acrylate oligomer composition.

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Q. 5
10. (Amended) A resin composition for manufacturing optical fiber ribbon according to claim 2, wherein the polymerization inhibitor is selected from the group consisting of hydroquinone, hydroquinone monomethylether, para-benzoquinone, phenothiazine, and a mixture thereof; and comprises 0.01 to 1 weight% of the photopolymerizable urethane acrylate oligomer composition.

11. (Amended) A resin composition for manufacturing optical fiber ribbon according to claim 1, wherein the monomer is selected from the group consisting of phenoxyethylacrylate, phenoxydiethylene glycol acrylate, phenoxytetraethylene glycol acrylate, phenoxyhexaethylene

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glycol acrylate, isobornyl acrylate, isobornyl methacrylate, N-vinylpyrrolidone, bisphenol ethoxylate diacrylate, ethoxylate phenol monoacrylate, polyethylene glycol 200 diacrylate, tripropylene glycol diacrylate, triethylpropane triacrylate, polyethyleneglycol diacrylate, ethoxylated triethylpropane triacrylate, pentaerythritol tetraacrylate, 1,4-butanediol diacrylate, 1,6-hexanediol diacrylate, ethoxylated pentaerythritol tetraacrylate, 2-phenoxyethyl acrylate, ethoxylated bisphenol A diacrylate, and a mixture thereof, and comprises 15 to 50 weight% of the resin composition for manufacturing optical fiber ribbon.

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12. (Amended) A resin composition for manufacturing optical fiber ribbon according to claim 1, wherein the photoinitiator is selected from the group consisting of IRGACURE #184 (1-hydroxy-cyclohexyl-phenyl-ketone), IRGACURE #907 (2-methyl-1((4-(methylthio)phenyl)-2-morpholinopropan-1-one), IRGACURE #500 (a mixture of IRGACURE # 184 and benzophenone), IRGACURE #651 (2,2-dimethoxy-1,2-diphenylethane-1-one), DAROCURE #1173 (2-hydroxy-2-methyl-1-phenyl-propan-1-one), CGI #1800 (a mixture of bis(2,6-dimethoxybenzoyl)-2,4,4-trimethyl-phenyl-pentylphosphineoxide and IRGACURE # 184), and CGI #1700 (a mixture of bis(2,6-dimethoxybenzoyl)-2,4,4-trimethyl-phenyl-pentylphosphineoxide and IRGACURE # 1173), and comprises 3 to 15 weight% of the resin composition for manufacturing optical fiber ribbon.

13. (Amended) A resin composition for manufacturing optical fiber ribbon according to claim 1, wherein the leveling/defoaming agent is selected from the group consisting of BYK #371 (an acrylated polydimethylsiloxane type leveling agent), BYK #353 (a polyacrylate type leveling agent), BYK #356 (a polyacrylate type leveling agent), BYK #359 (a polyacrylate copolymer leveling agent), BYK #361 (a polyacrylate copolymer leveling agent), BYK #067 (a polysiloxane type defoaming agent), BYK #141 (a polysiloxane type defoaming agent), TEGO RAD #2200 (an acrylated polyester siloxane copolymer), TEGO RAD #2500 (an acrylated polyester siloxane copolymer), TEGO RAD #410 (a polyester siloxane copolymer), TEGO RAD #435 (a polyester siloxane copolymer), and TEGO GLIDE #453 (a polyester siloxane copolymer), and comprises 0.1 to 5 weight% of the resin composition for manufacturing optical fiber ribbon.

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14. (Amended) A resin composition for manufacturing optical fiber ribbon according to claim 1, wherein the antioxidant is selected from the group consisting of IRGANOX 1010 (pentaerythritol tetrakis(3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate), IRGANOX 1035 (pentaerythritol tetrakis(3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate), IRGANOX 1076 (octadecyl-3-(3,5-di-tert-butyl-4-hydroxyphenyl)-propionate, and a mixture thereof, and comprises 0.1 to 5 weight% of the resin composition for manufacturing optical fiber ribbon.

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(cont.)
15. (Amended) A method of preparing resin for manufacturing optical fiber ribbon, comprising curing the resin composition of claim 1 by photo irradiation.

16. (Amended) The method according to claim 15, wherein the resin has 23 dyne/cm² or less surface tension and is prepared without the talc process for providing the surface slipping characteristics.

17. (Amended) A resin for manufacturing optical fiber ribbon, wherein the resin is manufactured by the method of claim 15.

18. (Amended) The resin according to claim 17, wherein the surface tension of the resin is 23 dyne/cm² or less.

19. (Amended) The resin according to claim 17, wherein the resin has a shrinkage of 7.2% or less when measured by an ASTM (American Society for Testing and Materials) D-792 method.
